



British Honduras
Department of Agriculture
Annual Report for 1944.



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FOREWORD

As the War has proceeded, agriculture in British Honduras has been increasingly concerned with food production. It was early realized that the Colony depended upon imported foodstuffs to a degree that was difficult to justify, even in peace time. In order to make provision for some immediate increase in home grown food crops and to lay the foundation for future development on sounder lines a grant, under the Colonial Development and Welfare Act, of £35,000, for the extension of food production and general development of agriculture, was approved early in 1943.

Unfortunately, the officer in charge of the Department of Agriculture died very soon after the grant had been sanctioned and, although he had made some progress with plans for development, the scheme was largely held in abeyance until the arrival of his successor at the end of June 1944. It was then necessary for some knowledge of the country and of its agriculture to be gained before plans for proceeding with the work could be formulated. These plans proved not to be markedly different from those originally worked out although, perhaps naturally, the angle of approach was slightly different.

One of the most striking features of the agriculture of the Colony is the lack of a knowledge of the elementary principles of good husbandry by the bulk of the small cultivators. Before any real progress can be made it will be necessary to bring help and practical instruction to these men on their own holdings. For this purpose a comparatively large staff of practical, well-trained farm demonstrators is needed, and to fill this need a fairly large proportion of the fund has been set aside for the training and employment of these demonstrators. The Agricultural Station in the Stann Creek Valley has been chosen as the centre for training, as its climate may be regarded approximately as an average of that of the country as a whole. Here the necessary buildings are being erected and as soon as these have been completed and suitable men have been recruited the training will begin.

Progress on these lines is bound to be slow but it is soundly based and experience in other tropical countries has shown that effective results may be expected.

Improvement in the marketing of foodstuffs forms another line of attack on the problem of food production and, as will be seen below, the grant has enabled this work to be strengthened and expanded.

Livestock, especially cattle and pigs, form a prominent feature of British Honduras, but not of its agriculture. It is felt that the self-sufficient small farm of the future must be based upon a system of "mixed farming". The extra funds now available have made possible the purchase of a limited number of Holstein bulls of good milking strains and of a number of Berkshire boars, all of which will be available, at a very low fee, for the servicing of the "small man's" stock. Negotiations have been started for the purchase of these animals.

With this attention to the improvement of the livestock must go the provision of facilities for better pastures. If the animals are to be kept on the farm, to be fed from the farm and to provide the farm with manure, a big fencing programme will have to be undertaken. A survey of the country's holdings made it clear that an ample supply of fencing material of all kinds, at a moderate price, is an essential to any rational scheme of improvement. Here, again, funds from the grant can profitably be employed.

It will be seen, then, that from the point of view of agricultural development in the all-important field of food production rapid progress has not been possible through sheer lack of staff and that the second half of the year has had to be devoted to planning. By the end of the year, however, a comprehensive scheme had been drawn up and agreed upon and much spade work had been done towards the ultimate implementing of the plan.

The staff of the Department have helped and co-operated loyally in what has amounted to a considerable re-orientation of policy and aims.

Section I.

General Survey of Agriculture in the Colony.

1944 was an exceptionally dry year; the driest, in fact, since rainfall records have been kept. In spite of this the rainfall was, on the whole, fairly well distributed throughout the year and, generally, crop production was above the average.

Food Crops.

Maize. As a result of unfavourable conditions in 1943 there was a shortage of maize until the 1944 crop was harvested and 204 tons were imported between January and September. The area planted with this crop was considerably larger than usual and the yield was greater than during any of the previous three years. Unduly dry weather in May necessitated replanting in many areas, but once the crop had become established the weather was favourable for growth and hot, dry weather at the time of harvest enabled the the corn to be gathered in excellent condition. As a result of this the Maya Indians are again well supplied and a surplus of 163 tons was purchased by the Board of Agriculture for resale later. The consumption of maize in the form of "corn grits" and meal increased, especially towards the end of the year, on account of the shortage of imported rice.

Rice. The quantity of rice grown is small, compared with the amount imported. The reason for this is that the local cost of producing the crop is considerably higher than the low price at which rice could be imported before the war. Nevertheless, the small but thriving rice-growing industry in the Toledo District, where most of the crop is grown, showed an expansion of area and an average yield of 2,000 lb. of padi per acre. Most of the rice is consumed by the growers. A surplus of 120 tons of padi was bought by the Board of Agriculture for resale after milling.

Other Food crops. Bean crops suffered to some extent from the lack of rain, especially in the Northern district. In the Stann Creek district the small kidney type of red

bean did well and is becoming more popular. A slightly larger area of cocos, dasheens and, especially, yams was planted. As is almost inevitable, the production of vegetables was mostly confined to the colder months. Cassava, the main food crop of the Carib population, was in ample supply, with enough surplus to provide much of the Colony's starch requirements.

Other Crops.

Coconuts. The continuance of good prices for coconuts resulted in an increase in the number of nuts exported. More attention is being given to the groves now that this is a paying crop. Most of the crop was produced in the south of the Colony which is now recovering from the 1941 hurricane and which did not suffer so severely as did the north from the 1942 hurricane and from the 1943 drought. The exports of this crop since 1939 have been:—

	1939	1940	1941	1942	1943	1944
Coconuts (number)	2,846,550	2,631,509	2,444,508	1,892,153	1,268,886	3,477,115
Copra (lb.)	996,419	186,814	246,750	584,204	536,843	—
Total (as coconuts)	5,536,830	3,185,900	3,110,730	3,372,300	2,879,415	3,477,115

Bananas. The demand for bananas for export was so insistent that fruit that would normally be rejected was readily taken. 194,980 bunches were exported, compared with 41,800 last year and 97,400 in 1942. It is not anticipated that this demand will continue after the war.

Citrus. Owing to lack of shipping practically no grapefruit was exported. The balance of the pulp manufactured from the 1942/43 crop (24,740 cwt.) was exported. A small consignment of fresh fruit was sent to Panama and 1,595 cwts. to Mexico. The subsidy to grapefruit growers in the Stann Creek Valley was increased from \$10 to \$20 per acre.

There was a small export of 2,085 cwts. of oranges to Mexico, but the greater part of this crop is consumed locally.

Sugar Cane. In the north lack of rain was responsible for a decrease in the crop and hence in the output of sugar from the Corozal factory. 1,116 tons of sugar were produced (from 11,900 tons of cane) as compared with an output of 1,483 tons of sugar in 1943. Brown sugar and rum, in small quantities, were produced by small factories in the Corozal district, three of which were in operation. Towards the end of the year a fair crop was in sight for the 1945 season.

In Toledo district in the south, four more small factories were operating, making a total of eight. Between them, these produced 187 tons of brown sugar. In the Belize

and Stann Creek districts the number of very small, ox- or mule-driven mills has increased. These produce syrup and wet brown sugar for local consumption.

Livestock.

Cattle. Cattle are kept almost entirely on the ranching system, although many of the ranches are but small in size. The limiting factor to the number of cattle that can be kept is the amount of grazing available in the dry season. Very little effort is made either to grow crops, or to make silage, to provide the fodder that is then so badly needed. A campaign to encourage fencing of pastures and rotational grazing and to encourage the planting of fodder grasses, notably Guinea grass (*Panicum maximum*) and Para grass (*Brachiaria mutica*) is being started and should, in time, produce valuable results. This will be a useful first step towards the introduction of mixed farming.

There has been an increase in the number of cattle, and a somewhat larger proportion of the country's meat supply was home produced. 1,362 cattle were imported for slaughter, compared with 1,628 in 1943.

Pigs. The increase in the amount of maize available for feeding is reflected in an increase in the pig population. This would have been greater had it not been for the fact that the buyers of bananas for export accepted practically all that was offered to them. In normal times the rejected bananas are used as pig feed.

Poultry. Similarly, with more food available, the number of poultry has increased. Eggs, although still in keen demand, were not so scarce as in 1943.

Diseases and Pests.

Livestock. There was a small outbreak of Anthrax in the Toledo district at the end of the year, resulting in the deaths of a few cattle. The outbreak was isolated by the enforcement of a local quarantine and no further cases were reported.

Paralytic rabies was reported as a possible cause of the loss of a number of cattle in Cayo district in 1943. A similar outbreak occurred in July 1944, resulting in the loss of some forty-five young cows. The fact that the deaths ceased when the cattle were moved to fresh pastures rather leads to the suspicion that plant poisoning may have been the cause.

An outbreak in the Stann Creek district of a disease of cattle with symptoms similar to those of foot-and-mouth disease caused some falling off of condition amongst the animals. Disinfection of the affected parts with a solution of potassium permanganate was successful in controlling and overcoming the outbreak.

The absence of a qualified Veterinary Surgeon in the Colony makes the diagnosis of disease difficult, and sometimes impossible.

Crops. The most serious pest attacking crops in this country is undoubtedly the "wee-wee" ant—a type of parasol ant (*Atta Cephalotes*). In some parts it makes the growing of cassava, vegetables and yams a difficult undertaking. Partial control has been effected by digging out the nests of the ants and pumping in "cyanogas", a proprietary cyanogen preparation. Treatment with carbon bisulphide also gives good results.

Damage was done to the bean crop in some localities of the Northern district by a small chrysomelid leaf-eating beetle.

Board of Agriculture.

Monthly meetings of the Board have been held regularly throughout the year. Operating with Government funds the Board bought all surpluses of the main food crops at a price that was guaranteed for the whole year. Its activities also included the importation and sale of maize from abroad. There is no doubt that the Board of Agriculture serves a very useful purpose in constantly reviewing and advising upon the Colony's food position.

Section II.

Work of the Department of Agriculture.

Changes in the staff have included the arrival in June of Mr. E. G. Staples as Director of Agriculture, the departure in July of Mr. J. M. Cave, Assistant Agricultural Officer, on secondment to Barbados, and the arrival in July of Mr. G. A. Southwell as an Assistant Agricultural Officer.

Mr. D. L. Foster, Junior Agricultural Instructor, went on leave in October and thence to Cornell University for a year's course of study.

Food Production.

Much of the work of the Department has centered upon this all-important activity. Agricultural stations have produced for distribution considerable quantities of planting material of the more important food crops and as a consequence, investigational work was very much reduced. Rice for planting was distributed free on loan and other material was sold at cost price. There was a keen demand for vegetable seeds, of which the Department is the principal importer.

Marketing. Funds available under the Food Production Scheme made it possible to establish district buying centres for the purchase of crops by the Board of Agriculture. Four of the centres were operated in the Northern district and one in the Belize district and at these, as well as at the five centres already established, buying of the main food crops took place throughout the season, at prices that had been fixed beforehand for the whole year. Four junior marketing officers were appointed to assist in this work. There is no doubt that the assurance of a price, guaranteed by Government, for the more important food crops and the provision of markets reasonably near to the centres of production has acted as a stimulus to production and is a line of work that is worth while to continue and expand.

Extension work. Nine Farm Demonstrators were appointed during the year. These men, together with as many as possible of the existing staff, spent a large part of their time on tour, encouraging the planting of food crops, assisting with marketing and helping generally with the drive for increased production of food. In view of the scattered nature of the agricultural population ample facilities for travelling, as far as conditions allow, are afforded to the field staff.

Rice.

The extension of the British Guiana type rice, No. 79, has been continued in Toledo district. This rice takes longer to come to maturity than the local B. H. Creole, but is a heavier yielder.

Progeny row trials of a number of introduced varieties and of two local varieties were continued.

A survey was made of lands possibly suitable for rice-growing in the mangrove area just inland from Belize, and an acre was cleared and "bunded" for a trial planting. The rise and fall of tide and other conditions here are very similar to those of the tidal areas of Sierra Leone where the crop is successfully grown without recourse to expensive pumping machinery.

Rice Loans.

Another line of attack in the food production campaign is the granting of small loans to rice growers to assist them in the cultivation of this crop. These were continued in the Toledo district and the system this year was extended to the Belize district.

Mixed Farming and Animal Husbandry.

Generally speaking, crops in British Honduras are grown under a system of "shifting cultivation". A piece of forest or high bush is felled and burnt and a food crop (usually maize) is grown. This is often followed by a further crop during the next year, after which the land is allowed to go back to bush for a number of years until it has regained its fertility. A logical development of this system would be to replace the bush fallow by a grass fallow and to manure the land with cattle manure while under grass. To test out the possibility of this, two small experimental farms are being established at each of the Department's two Agricultural Stations at Corozal and Stann Creek. In one of these farms at each station fodder grasses will be planted at the beginning of the fallow period. The grass will be cut and fed to stabled cattle, whose manure will be applied to the land, especially during the later years of the grass fallow. In the other case the fallow land will be put down to pasture and grazed, the grazing being intensified during the later years of the fallow. These small farms should yield useful data and experience in connection with the introduction of mixed farming.

Livestock.

Pure and half-bred Berkshire boars are kept at all the Department's stations and there is a moderate demand for their services. The condition of the pigs in the villages is evidence of the value of this policy, which has been carried on for several years.

Cocoa.

An experimental area of four acres of cocoa has been planted in the upper part of the Stann Creek valley where the tree is probably indigenous. Plants grown from the seed of locally selected trees of the "Forastero" type were used. Later, a number of these trees will be budded with material from heavily yielding trees from the West Indies.

Cotton.

Small plots of Sea Island Cotton produced rather unexpected results. The crop at Corozal was a failure because of poor germination. A plot at Cayo in the west of the Colony grew well and promises to yield satisfactorily.

Agricultural Education.

Although, as can be seen above, agricultural education, in its broadest and most practical sense, is the pivot upon which hinges a large part of the plans for future development, attention to school gardens, as in the past, has not been neglected. Schools have been visited, as a matter of routine, by the staff when on tour and advice and help has been given. In addition, meetings of school teachers and others have been addressed and the aims and methods of plans for production have been explained to them.

E. G. STAPLES,

Director of Agriculture.

TABLE I
Agricultural Products. Exports — 1944.

PRODUCE	Destination	Quantity	Value in \$
Coconuts (No.)	U.S.A.	3,477,115	138,535
Copra (lb.)	Nil	Nil	Nil
Bananas (Bunches)	U.S.A.	194,981	86,328
Plantains (Bunches)	U.S.A. Mexico	5,145 60	1,487 15
	Total	5,205	1,502
Grapefruit (Fresh) (Cwt)	Mexico Panama	1,595 223	1,607 825
	Total	1,818	2,432
Grapefruit (Pulp) (Cwt)	Jamaica	24,740	89,064
Grapefruit (Juice)	Nil	Nil	Nil
Grapefruit (Canned) (Cwt)	Nil	Nil	Nil
Oranges (Fresh) (Cwt)	Mexico	2,085	3,666
Tangerines (Fresh) (Cwt)	Mexico	90	186
Lemons (Fresh) (Cwt)	Mexico	14½	35
Breadfruit (lb.)	Mexico	2,220	25
Mangoes (Cwt.)	Mexico	114	270
Pineapples (lb.)	U.S.A. Mexico	23,040 200	578 15
	Total	23,240	593
Pears Avacado, (Cwt)	Mexico	460	635
Cabbages (lbs.)	Mexico	400	40
Tomatoes (lb.)	Mexico	160	16
Poultry (No.)	Mexico	14	8
Sheep (No.)	Mexico	50	150
Candles (lb.)	Mexico	1,000	100
Cocoa (Raw) (lbs.)	Mexico	1,400	140
Sugar (tons)	Honduras	9	1,414
Common Soap (lb.)	Mexico Honduras High Seas	17,786 605 750	1,965 66 107
	Total	19,141	2,138
Total Agricultural Produce			\$327,277

TABLE II

Imports of Foodstuffs — 1944.

COMMODITY	From	Quantity	Value in \$
Cattle (No.)	Honduras	10 (For breeding) 1,362 (Other purposes)	459 65,962
	Total	1,372	66,421
Butter (lb.)	Honduras	25	6
	Mexico	10	4
	Australia	21,787	9,308
	Canada	55,168	25,693
	Total (Cwt)	687	35,011
Butter Substitutes (Cwt)	Jamaica	1,223	24,529
Cheese (lb.)	Honduras	555	137
	Guatemala	5	2
	U. S. A	47,257	16,920
	Canada	25,452	7,918
	Total (Cwt.)	654	24,977
Rice (lb.)	Mexico	106	6
	San Salvador	2,517,600	161,720
	Total (Cwt)	22,479	161,726
Flour (Wheaten) (Sacks of 196 lb.) ..	U.S.A.	38,867	285,104
	Canada	6,356	58,747
	Total	45,223	343,851
Beans & Peas (lb.)	U.S.A.	269,400	25,099
	Honduras	82,182	4,860
	Mexico	2,154	132
	Guatemala	125	17
	San Salvador	21,600	1,199
	Canada	313,000	29,357
	Total (Cwt)	6,149	60,664
Farinaceous Preparations (Cwt) ..	U.S.A.	1,721	19,194
Lard & Lard	Honduras	43,760	8,679
Substitutes (Cwt)	Mexico	400	145
	San Salvador	60	22
	U.S.A.	259,722	35,559
	Canada	58,450	8,120
	Jamaica	603,800	83,485
	Total (Cwt)	8,627	136,200
Milk, Condensed &	U.S.A.	514,745	95,799
Unsweetened (lb.)	Canada	314,699	41,070
	Total (Cwt)	8,299	\$ 136,869

Milk Powder (Cwt)	..	..	..	U.S.A. Canada	8,920 8,631	\$ 5,324 4,430
Total (Cwt)					157	9,664
Beef in Barrels (Cwt)	..	..	..	U.S.A. Canada	14,737 69,000	2,486 14,897
Total (Cwt)					748	17,383
Pork, (Various), in Barrels (lb.)	..			U.S.A. Canada	72,900 149,080	10,185 30,155
Total (Cwt)					1,982	40,340
Onions (lb.)	..	..	..	U.S.A. Honduras Mexico San Salvador	225,850 45,762 2,597 120	14,366 4,333 297 36
Total (Cwt)					2,449	19,032
Irish Potatoes (lb.)	..	..	..	U.S.A. Honduras Guatemala	375,060 22,531 10,206	18,565 1,453 5,29
Total (Cwt)					3,664	20,547
Garlic (lb.)				Honduras Guatemala San Salvador	362 4,141 657	33 340 221
Total (Cwt)					46	594
Eggs (Doz.)	..	..	..	Honduras Guatemala	2,800 4,172	1,106 1,610
Total (doz)					6,972	2,716
Pigs (No.)	..	..	..	Honduras Honduras	7 (For breeding) 294 (For other purposes)	160 4,936
Total					301	5,096
Maize (lb.)	..	..	..	Honduras San Salvador	258,585 199,630	12,447 8,983
Total (Cwt.)					4,091	21,430
Poultry (No.)				Honduras Guatemala	1,627 8	1,111 7
Total					1,635	1,118
Other Fresh Vegetables (lb.)	..	..		U. S. A. Honduras Guatemala	54,465 6,895 1,778	3,926 274 187
Total (Cwt)					564	4,387
Total	..	..	..			\$1,151,555

